

BIOCHEMISTRY 1
SUMMER 2015

2 ½ Hours

Total Marks : 40

SECTION-B (SAQ) (24 Marks)

2. Short answer question (Any six out of SEVEN)

- a) Secondary and Tertiary structure of Proteins
- b) Define Isoenzymes and explain their clinical applications with examples
- c) Explain Haemoglobinopathies and give example
- d) t-RNA and its function
- e) A one year old child with delayed milestone was brought to Hospital. His parents gave history of mousy odour from urine
 - i) What is the probable diagnosis ?
 - ii) What is the biochemical basis for mousy odour of urine ?
 - iii) How should this patient be treated
 - iv) Draw the reaction catalyzed by deficient enzyme
- f) State the coenzyme of thiamine and pyridoxine and give two biochemical functions of each
- g) A three year old boy suffered from pain in joints and showed signs of mental retardation. He displayed aggressive and self-destructive behaviour of biting his fingers and lips. His serum uric acid level was 12 mg/d.
 - i) What is the probable diagnosis?
 - ii) Name the defective enzyme in this disease and explain its role in increase levels of uric acid
 - iii) What is the mode of inheritance of this disease?
 - iv) What are the normal serum uric acid levels?

SECTION -C -LAQ (16 Marks)

3. Long answer questions : (Any two out of three) (2x8=16)

- a) Describe the formation and fate of ammonia in the human body
- b) State the sources, daily requirement, functions and deficiency manifestation of Vitamin A
- c) Explain the electron transport chain. Mention the sites of ATP synthesis and also the inhibitors.